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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/072,353	02/07/2002	James H. Buchanan	131105.1004	4267

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EXAMINER
WILSON, ROBERT W

ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 November 2006</u>.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15 and 17-28* is/are pending in the application.

 4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15 & 17-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

 a)☐ All b)☐ Some * c)☐ None of:

  1.☐ Certified copies of the priority documents have been received.

  2.☐ Certified copies of the priority documents have been received in Application No. _____.

  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-7, 12-15, 17-28 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

Claims 1-7, 12-15, & 17-28 are directed to a method of provisioning or a system for provisioning VPNs graphically which is an abstract concept. An abstract concept falls under the category of a judicial exception. In order for a judicial exception to be statutory the claim language must either perform a physical transformation or perform a practical application with a tangible solution. The examiner recommends that the applicant amend the claims to add a practical application with a tangible result without adding new matter.

Claim Rejections - 35 USC § 102

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2.   Claims 1-14 are rejected under 35 U.S.C. 102(B) as being anticipated by Cisco Document

No.: 78-10548-02 which is dated 2000 and is an IDS document of record.

Referring to claim 1, Cisco Document No.: 78-10548-02; henceforth, referred to as Cisco Document teaches: A method for provision routing policy of a plurality of sites of a Virtual Private Network (VPN) in a packet switched network the VPN established at least in part by constraining distribution of VPN route within the network (Pgs 3-1 to 3-41 show how IP addresses can be assigned to managed sites as a part of a VPN using BGP or packet network which upon assignment of the IP addresses constrain the distribution of export routers) comprising:

graphically defining at least one topological relationship between said plurality of sites of said VPN, the at least one topological relationship defining permitted communication between the plurality of sites (Graphically assigning a customer edge router as well as a providers edge router to be managed per Figures 3-18, 3-28, & 3-29. Graphically assigning IP addresses to managed router in a VPN which comprise both customer edge router and provider edge router Figures 3-41 through 3-46 which results in generating an automatic export router map per Note on Pg 3-41; thus, resulting in VPN or topological relationship which defines which routes can be exported or communication between the plurality of sites)

and automatically generating at least one route distribution rule for provisioning to at least of the plurality of sites of said VPN based at least in part on said defied relationship, the at least one route distribution rule constraining at least in part distribution by the at least one of the plurality of sites of the VPN router within the network (a export route map or route distribution rule is automatically provisioned upon assignment of IP addresses on which the VPN relationship is based and results in a export route map which is a rule which defines which routes can be exported within the network per Pg 3-38 to 3-41)

In addition Cisco Document teaches:

Regarding claim 2, wherein automatically generating at least one route distribution rule comprises: automatically generating at least one import rule; automatically generating at least one local export rule, and automatically generating at least one remote export rule (export router map or export rule per Pg 3-41)

Regarding claim 3, wherein automatically generating at least one route distribution rule for each site comprises generating an import rule for discarding route information received from the respective site (VRF configuration commands are used create to create route target import rule per Pgs 1-9 which inherently defines what route information is discarded)

Regarding claim 4, wherein automatically generating at least one route distribution rule comprises generating for a site of said plurality of sites, an import rule for accepting route information, in response to said site being a member of a mesh VPN component, received form any site of said plurality of sites which is a member of said mesh VPN component. (VRF configuration commands are used create to create route target import rule per Pgs 1-9 which inherently defines what route information is discarded associated with a VPN in a mesh associated with routing community per Pgs 1-10 to Pg 1-11)

Regarding claim 5, wherein automatically generating at least one route distribution rule comprises generating, for a site of said plurality sites an import rule for accepting route information, in response to said site being a hub of a hub-spoke VPN component (VRF configuration commands are used create to create route target import rule per Pgs 1-9 which inherently defines what route information is discarded associated with a VPN in a hub and spoke associated with routing community per Pgs 1-10 to Pg 1-11)

Regarding claim 6, wherein automatically generating at least one route distribution rule comprises generating of a site of said plurality of sites, an import rule for accepting route information, in response to said site being a spoke of a hub-spoke VPN component, received from any site of said plurality of sites which is a hub of said hub-spoke VPN component (VRF configuration commands are used create to create route target import rule per Pgs 1-9 which inherently defines what route information is discarded associated with a VPN in a hub and spoke associated with routing community per Pgs 1-10 to Pg 1-11)

Regarding claim 7, wherein automatically generating at least one route distribution rule comprises automatically generating at least one local export rule, wherein the number of local export rules generated is at least equal to the number of VPN components of said VPN that the respective site is a member of (export router map or export rule per Pg 3-41 is defined for each local VPN)

Regarding claim 8, wherein automatically generating at least one route distribution rule comprises: generating for a site of said plurality of sites in response to said site being a member of a mesh VPN component a local export rule for accepting routes from a provided Edge-Customer edge (PE-CE) routing protocol (The exporter router map or export rule per Pg 3-41 is for exporting route information from a provider edge router to a customer edge router) Associating route information of said route information to all member of said mesh VPN component (Customer edge routing communities are defined per Pg 1-10 to 1-11 for a mesh and route information would only be shared with members)

Regarding claim 9, wherein automatically generating at least one route distribution rule comprises: generating, for a site of said plurality of sites in response to said site being a hub of a hub spoke VPN component , a local export rule :

Accepting routes from a Provider Edge- Customer Edge (PE-CE) routing protocol; associating route information of said VPN to said accepted routes; and advertising said accepted routes and said route information to all members of said hub-spoke VPN component. (VRF configuration commands are used to define an export rule for a customer edge router community which are hub and spoke per Pgs 1-9 to 1-11; thus, resulting in accepting routes from a Provider Edge- Customer Edge (PE-CE) routing protocol; associating route information of said VPN to said accepted routes; and advertising said accepted routes and said route information to all members of said hub-spoke VPN component)

Regarding claim 10, wherein automatically generating at least one route distribution rule comprises: generating, for a site of said plurality of sites in response to said site being a hub of a hub spoke VPN component , a local export rule :

Accepting routes from a Provider Edge- Customer Edge (PE-CE) routing protocol; associating route information of said VPN to said accepted routes; and advertising said accepted routes and said route information to all members of said hub-spoke VPN component. (VRF configuration commands are used to define an export rule for a customer edge router community which are hub and spoke per Pgs 1-9 to 1-11; thus, resulting in accepting routes from a Provider Edge- Customer Edge (PE-CE) routing protocol; associating route information of said VPN to said accepted routes; and advertising said accepted routes and said route information to all members of said hub-spoke VPN component)

Regarding claim 11, wherein automatically generating at least one route distribution rule comprises: generating, for a site of said plurality of sites in response to said site being a hub of a hub spoke VPN component, a local export rule :

Accepting routes from a Provider Edge- Customer Edge (PE-CE) routing protocol; associating route information of said VPN to said accepted routes; and advertising said accepted routes and said route information to all members of said hub-spoke VPN component. (VRF configuration commands are used to define an export rule for a customer edge router community which are hub and spoke per Pgs 1-9 to 1-11; thus, resulting in accepting routes from a Provider Edge- Customer Edge (PE-CE) routing protocol; associating route information of said VPN to said accepted routes; and advertising said accepted routes and said route information to all members of said hub-spoke VPN component)

Regarding claim 12, wherein automatically generating at least one route distribution rule for each site comprises generating a remote export rule for not advertising route information received from a site which is a member of a VPN component to a site which is not a member of said VPN component (export router map or export rule is automatically created which restrains advertising routes from local members out to the backbone per Pg 3-41)

Regarding claim 13, wherein automatically generating at least one route distribution rule for each site comprises generating, for a site of said plurality of sites in response to said site being a member of at least two VPN components, a remote export rule for advertising route information received form a site which is a member of a first VPN component of said at least two VPN components to at least one site which is not a member of said first VPN component (export router map or export rule is automatically created which restrains advertising routes from local members out to the backbone per Pg 3-41 and Fig 1-4 per Pg 1-8 which shows restrain of routers from at least two VPN components)

Regarding claim 14, further comprising storing at least one route distribution rule in a database (export router map or export rule per Pg 3-41 stored in VRF table or database as shown in Fig 1-4 per Pg 1-8)

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 15, 17-22, & 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cisco Document No.: 78-10548-02 which is dated 2000 and is an IDS document of record in

view of Arquie (U.S. Patent No.: 6,880,127)

Referring to Claim 15, the Cisco Document teaches: A system for provisioning routing policy of
a plurality of sites of a Virtual Private Network, in a packet switched network, the VPN
establishing at least in part by constraining distribution of VPN routes within the network (Pgs 3-
1 to 3-41 describes system for assigning IP addresses to managed sites as a part of a VPN using
BGP or packet network which upon assignment of the IP addresses constrain the distribution of
export route in a packet network)

A display area graphically displaying at least one VPN component of said VPN (Figs 3-18, 3-28,
3-29, 3-41, 3-46, & 3-47 are displays which are used to graphically define VPNS displaying both
CE and PE routers which are assigned to VPN and are thus VPN components)

A customer area displaying said plurality of sites, at least one of said plurality of site being
dragged from said customer area to said display area, wherein dropping of said at least one site
on a graphical representation of said at least one VPN component causes said at least one site to
be displayed in said display area and to become a member of said VPN component and
automatically generating at least one route distribution rule for constraining distribution of routes
the at least one of said plurality of sites (Figs 3-18, 3-28, 3-29, 3-41, 3-46, & 3-47 which display
customer edge routers or customer area routers which are displayed graphically and are assigned
to become a member of a VPN or VPN component and upon being assigned an export route map
or rule is automatically generated which constrains the export of routes or distribution of routers
per Pg 3-41)

The Cisco Document does not expressly call for: dragging of sites for assignment on a display
area

Arquie teaches: dragging of sites for assignment on a display area per Figs 1A-1E and per col. 1
line 27 to col. 2 line 29 & col. 2 line 40 to col. 3 line 67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add
the dragging of sites for assignment on a display area of Arquie in place of the graphical display
of the Cisco Document in order to build a system which provides an administrator with a more
user friendly displays which can be used to assign nodes in the network more efficiently.

In addition Cisco Document teaches:

Regarding claim 17, further comprising means for distributing said generated route distribution
rule to a respective one of said plurality of sites of said VPN components (MPLS VPN software
is the means for distributing the export route map per Pg 3-41)

Regarding claim 18, further comprising means for processing, by each site, route information received from said plurality of sites based at least in part on said least one route distribution rule (Each site has MPLS VPN software or means for processing route information received from the plurality of sites based upon export route map per Pg 3-41 or route distribution rule)

Regarding claim 19, further comprising means for establishing routing relations between said plurality of sites base at least in part on said processed routing information (The export route map provides the means for establishing routing relations between said plurality of sites based at least on said processed routing information)

Regarding claim 20, further comprising a database operable to store said at least one route distribution rule (The VRF routing table or data base stores the export route map per Pg 3-41)

Referring to claim 21, the Cisco Document teaches: A method for provisioning routing policy of a plurality of sites of a Virtual Private Network (VPN) in a packet switched network the VPN established at least in part by constraining distribution VPN routes within the network co (Pgs 3-1 to 3-41 show how IP addresses can be assigned to managed sites as a part of a VPN using BGP or packet network which upon assignment of the IP addresses constrain the distribution of export routers)

graphically displaying at least one VPN component of said VPN (Figs 3-18, 3-28, 3-29, 3-41, 3-46, & 3-47 are displays which are used to graphically define VPNS displaying both CE and PE routers which are assigned to VPN and are thus VPN components)

enabling assigning of said representation of at least one site on said representation of said at least one VPN component thereby causing said site to become a member of said VPN component (Figs 3-18, 3-28, 3-29, 3-41, 3-46, & 3-47 are displays which are used to graphically define VPNS displaying both CE and PE routers which are assigned to VPN and are thus VPN components)

enabling assigning of said representation of said at least one site on said representation of said at least one VPN component thereby causing said site to become a member of a VPN component (Figs 3-18, 3-28, 3-29, 3-41, 3-46, & 3-47 are displays which are used to graphically define VPNS displaying both CE and PE routers which are assigned to VPN and are thus VPN components)

The Cisco Document does not expressly call for: dragging and dropping

Arquie teaches: dragging and dropping for assignment on a display area per Figs 1A-1E and per col. 1 line 27 to col. 2 line 29 & col. 2 line 40 to col. 3 line 67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the dragging and dropping of sites for assignment on a display area of Arquie in place of the

graphical display of the Cisco document in order to build a system which provides an administrator with a more user friendly displays which can be used to assign nodes in the network more efficiently.

In addition the Cisco Document teaches:

Regarding claim 22, further comprising storing at least one route distribution rule and route information received from said plurality of sites in a data base (The VRF table stores the export route map or route distribution rule and inherently stores routing information before forwarding per Pg 3-41)

Regarding claim 28, wherein the VPN route establish label-switched paths through the network between the plurality of sites (MPLS or label switched paths per Pgs 3-13 to 3-36 respectively)

Response to Amendment

5.   Applicant's arguments with respect to claims 1-15 & 17-22 have been considered but are

moot in view of the new ground(s) of rejection.

The examiner respectively disagrees with the applicant's argument that the Cisco reference does not teach a topological relationship nor does the Cisco reference teach automatically generating rule. The applicant broadly defines topological relationship and also broadly defines automatically generating a rule in the claim language. The examiner has interpreted that the Cisco provisioning software which is used to provision customer edge routers and provider edge routers into VPNs defines an interconnecting topology or topological relationship. The reference teaches on Pg 3-41 that an export route map is automatically generated for a VPN which the examiner has interpreted as automatically generating a rule. The examiner finds the applicant argument unpersuasive.

The examiner has also rejected the claims in view of a new ground of rejection. Claims 1-7, 12-15, & 17-28 are directed to a method of provisioning or a system for provisioning VPNs graphically which are abstract concepts. An abstract concept falls under the category of a judicial exception. In order for a judicial exception to be statutory the claim language must either perform a physical transformation or perform a practical application with a tangible solution.
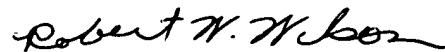
Conclusion

6.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Doris To can be reached on 571/272-7629. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert W Wilson
Examiner
Art Unit 2616

RWW
2/6/07

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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600